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A NEW SPECIES OF *AMBLYCASTOR* FROM THE *PLATYBELODON* BEDS, TUNG GUR FORMATION, OF MONGOLIA[1]

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The appearance of *Amblycastor* in the *Platybelodon* beds of Mongolia offers another genus which may be used in correlating the faunas of the Eastern and Western Hemispheres. The genotype was described by Matthew[3] from the Lower Snake Creek beds of western Nebraska. There are some isolated teeth from the Pawnee Creek beds of Colorado and possibly one specimen from a Miocene fauna near Fleming, Texas.

A dental terminology for beaver teeth has been worked out for a paper now in press, "A Review of the Tertiary Beavers." Some of

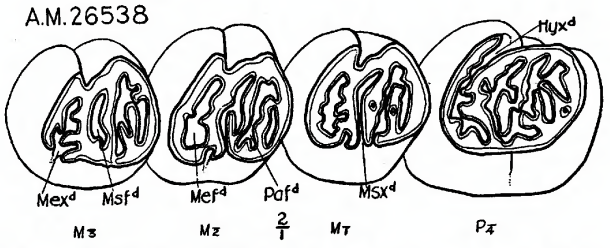

Fig. 1. *Amblycastor tungurensis*, new species, A. M. 26538. Left lower cheek teeth. Twice natural size.

Hyxd = hypoflexid; mefd = metafossettid; mexd = metaflexid; msfd = mesafossettid; msxd = mesaflexid; pafd = parafossettid.

these names have been used in this description of a new species from Mongolia. The occlusal inflections, lateral grooves and isolated lakes have been called flexi or flexids, striae or striids and fossettes or fossettids. These names have been prefixed in accordance with their proximity to the main cusps on the tooth.

I wish to thank Dr. Walter Granger and Père Teilhard de Chardin[4] for the privilege of studying and describing the Mongolian material. The drawings were made by Owen J. Poe.

[1]Publications of the Asiatic Expeditions of The American Museum of Natural History. Contribution No. 122.

[2]Museum of Palaeontology, University of California.

[3]Matthew, W. D. 1918. Bull. Amer. Mus. Nat. Hist., XXVIII, pp. 197–199, figs. 7–9.

[4]The specimens were originally allotted to Père Teilhard who in turn gave them to me for description

GENERIC DIAGNOSIS.—Incisors with convex anterior faces which are grooved longitudinally as in *Trogontherium* and *Castoroides;* lower molars with a mesastriid and a hypostriid, neither extending to the base of the tooth; cheek teeth relatively low-crowned; diastema of lower jaw normal, not short; large crescentic parafossette on anterior half of P_4; P_4 not as elongate as in other castoroids.

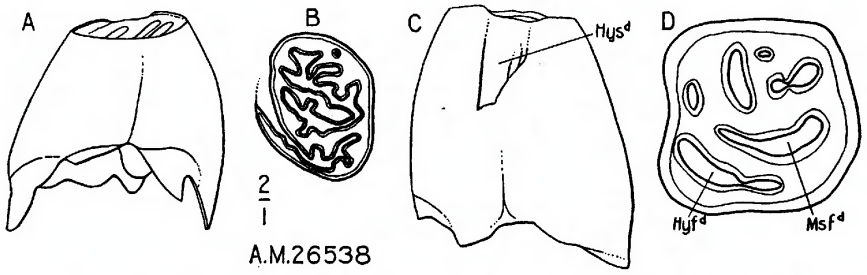

Fig. 2. *Amblycastor tungurensis*, new species, A. M. 26538. Left P_4; A, lingual view; B, occlusal view; C, labial view; D, cross-section drawn from open base of tooth. Twice natural size.

Hyfd = hypofossettid; hysd = hypostriid; msfd = mesafossettid.

Amblycastor tungurensis, new species

TYPE.[1]—A. M. 26538. Left lower jaw with P_4-M_3, a fragment of a right P_4, a right M_1-M_2, a right M^{1-2}, a left M^2, seven skull fragments and part of a right lower jaw.

PARATYPES.—A. M. 26539. A left P_4, a left M_2, fragments of two femora, a tibia, a calcaneum and an ulna.

LOCALITY.—Twenty-five miles northeast of Gur Tung Khara Usu, Eastern Gobi, Mongolia; *Platybelodon* beds; Upper Miocene.

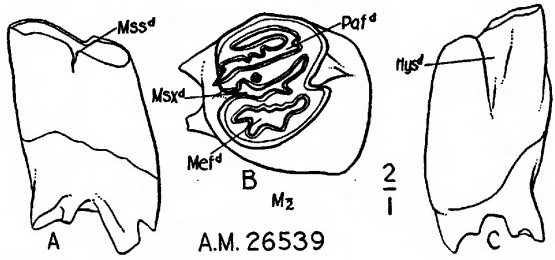

Fig. 3. *Amblycastor tungurensis*, new species, A. M. 26539. Right M_2; A, lingual view; B, occlusal view; C, labial view. Twice natural size.

Hysd = hypostriid; mefd = metafossettid; mssd = mesastriid; msxd = mesaflexid; pafd = parafossettid.

SPECIFIC DIAGNOSIS AND DESCRIPTION.—P_4-plications of fossettids probably more complicated than in *A. fluminis* Matthew; no mesastriid; two fossettids open into the hypostriid, the anterior of which is a small fossettid while the posterior is long (there is no trace of the anterior fossettid in *A. fluminis*); the metafossettid is con-

[1]The association of the isolated teeth, right jaw and skull fragments with the left lower jaw is not certain. Most of the teeth were found at one site while the limb bones (paratype) were found at another.

nected with the hypoflexid; the mesafossettid in *A. fluminis* is more crescentic and larger than in *A. tungurensis;* the parafossettid of *A. fluminis* is represented in *A. tungurensis* by two isolated fossettids, also a tiny anterior fossettid.

LOWER MOLARS.—With three anterior and two posterior roots; enamel plications more complicated than in *A. fluminis;* hypostriid very short; one posterior and two anterior fossettids; sometimes the two anterior fossettids are connected at one end.

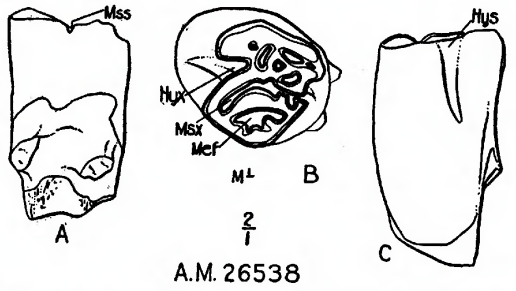

Fig. 4. *Amblycastor tungurensis*, new species, A. M. 26538. Left M^1; A, labial view; B, occlusal view, C, lingual view. Twice natural size.

Hys = hypostria; hyx = hypoflexus; mef = metafossette; mss = mesastria; msx = mesaflexus.

UPPER PREMOLAR (P^4).—Four anterior fossettes instead of one as in *A. fluminis;* with large crescentic metafossette similar to *A. fluminis*; although part of the tooth is broken away, four or five posterior fossettes are still present; P^4 in the Mongolia species is more complicated than in *A. fluminis.*

UPPER MOLARS.—Usually with five or six anterior fossettes, one long crescentic mesaflexus or mesafossette and a prominent metafossette.

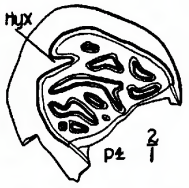

Fig. 5

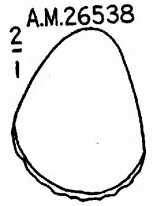

Fig. 6

Fig. 5. *Amblycastor tungurensis*, new species, A. M. 26538. Right P^4. Twice natural size.

Hyx = hypoflexus.

Fig. 6. *Amblycastor tungurensis*, new species, A. M. 26538. Cross-section of incisor. Twice natural size.

INCISOR.—With convex enamel face. The surface is grooved longitudinally as in *Castoroides* and *Trogontherium.*

LIMB BONES.—Femur flattened as in *Castor*, but its third trochanter is more proximal than in the living beaver. It differs from *Erethrizon* which has a femur with a round shaft and no prominent third trochanter. Tibia curved anteriorly at its

distal end as in *Castor*, and the posterior border at the distal end of the shaft shows a rugose area indicating an appressed fibula. In *Erethrizon* the tibia does not curve anteriorly nor are the tibia and fibula appressed at their distal ends as in *Castor*. Tuber calcis of the calcaneum shorter and calcanear facet slightly different from *Castor;* the fragment in this collection is quite unlike that of *Erethrizon*. Greater sigmoid facet of ulna not as symmetrical as in *Erethrizon*, shaped like that of *Castor* but wider. Radial facet not as distinct as in *Erethrizon*, and although very like *Castor*, it extends farther posteriorly (as a process) than in that genus. Shaft flattened with wide sulcus on medial side also with distinct sulcus opposite anconeal process. This bone is distinctly different from *Erethrizon* which has a round shaft.

REMARKS.—The beavers of Pliocene age which have been found in the *Hipparion* faunas of Eastern Asia are: (1) *Castor andersoni* (Schlosser) and *Dipoides* cf. *major* Schlosser, from Olan Corea and Ertemte in Mongolia; (2) *Castor broilii* (Teilhard and Young), *Castor zdanskyi* Young, and *Dipoides major* Schlosser from northwest Shansi in North China. *Amblycastor tungurensis* is easily distinguished from these forms by its longitudinally grooved incisor and complicated cheek-tooth pattern.

SUMMARY.—(1) *Amblycastor tungurensis*, the new species, is closely related to although specifically distinct from *A. fluminis* Matthew from the Lower Snake Creek (Upper Miocene) fauna in North America. (2) The fragmentary limb bones indicate that *Amblycastor* is a beaver and not an hystricomorph. (3) The Mongolian species, apparently, possessed a larger head though shorter limbs than *Castor*, and the limb bones are flattened as in the living beaver.